

Exhibit 4

Exhibit 2

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF MICHIGAN

Toby Schechner, Barbara Barnes,
Laura Bliss, Kathleen Jordan, Kathryn
Limpede, Louise Miljenovic, Candace
Oliarny, Beverly Simmons, Richard
Thome and Mary Ellen Thome,
individually and on behalf of all others
similarly situated,

Plaintiffs,

v.

Whirlpool Corporation,

Defendants.

Case No. 2:16-cv-12409-SJM-RSW

SUR-REPLY DECLARATION OF KEITH R. UGONE, PH.D.

June 5, 2018

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I, Keith R. Ugone, hereby declare:

I. OVERVIEW OF ASSIGNMENT

1. I am an economist and have been retained by counsel for Whirlpool Corporation (“Whirlpool” or “Defendant”) to offer my opinions regarding whether claimed Class-wide damages can be reliably evaluated using common proof in the matter of *Schechner et al. v. Whirlpool Corporation*. On February 12, 2018, Mr. Colin B. Weir (“Mr. Weir”) submitted a declaration (“Weir Declaration”) proposing a methodology for evaluating claimed Class-wide damages in this matter. I submitted a rebuttal declaration on April 9, 2018 (the “Ugone Declaration”). In the Ugone Declaration, I evaluated from an economic and claimed damages perspective the hedonic regression analysis and the conjoint analysis Mr. Weir proposed for measuring a “price premium percentage” attributable to the AquaLift feature.¹ Given the facts and circumstances of this case, my opinion was that the approaches proposed by Mr. Weir would not provide a reliable or relevant common proof measure of the economic injury (if any) suffered by putative Class members.²
2. Mr. Weir was deposed on May 15, 2018 (the “Weir Deposition”) and submitted a reply declaration on May 17, 2018 (the “Weir Reply Declaration”). In the Weir Reply Declaration, Mr. Weir responded to certain observations contained in the Ugone Declaration. Additionally, in his reply declaration and his deposition testimony, Mr. Weir

¹ Declaration of Keith R. Ugone, Ph.D., dated April 9, 2018 (“Ugone Declaration”), p. 1. I also addressed whether standard economic analysis could be used to quantify claimed damages on a Class-wide basis using common proof. (Ugone Declaration, p. 3.)

² Ugone Declaration, pp. 3 – 6.

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made numerous additional claims and cited to support that was not included or discussed in the Weir Declaration. I have been requested by counsel for Whirlpool to evaluate the additional claims made by Mr. Weir and respond to Mr. Weir's evaluation of the Ugone Declaration. To the extent that I do not comment on a particular reply point being made by Mr. Weir, such a lack of discussion generally means no additional comment is required beyond what is contained in the Ugone Declaration.

II. SUMMARY OF OPINIONS

3. Based upon (a) my review of the Weir Declaration and the Weir Reply Declaration, (b) my economics and damages quantification training and experience, (c) documentary evidence, (d) deposition testimony (i.e., the Weir Deposition, among others), and (e) the detailed analyses presented in the Ugone Declaration, I have reached the following conclusions regarding Mr. Weir's proposed hedonic regression and conjoint analysis approaches for evaluating Class-wide damages in this matter (using a "percentage price premium" metric).
 - a. Mr. Weir Dismisses Important Critiques Of His Constant Percentage Price Premium Approach. Mr. Weir's assertion is incorrect that his claimed constant percentage price premium approach can be used to calculate reliably Class-wide damages using common proof.
 - i. Mr. Weir dismisses the price variation analyses contained in the Ugone Declaration based upon a misunderstanding and/or mischaracterization of the purpose of these analyses (i.e., that oven prices can vary significantly based upon features unrelated to the AquaLift cleaning feature).
 - ii. Mr. Weir incorrectly asserts that it would be "economically reasonable" to apply his claimed percentage price premium to individual purchases of the Challenged Products to determine claimed damages. However, Mr. Weir's error in logic and application is straightforward. Mr. Weir applies his claimed percentage price premium to ovens that (for example) are higher priced for reasons totally unrelated to the AquaLift feature (e.g., Jenn Air ovens with the AquaLift cleaning feature as compared to Whirlpool ovens with the AquaLift cleaning feature). Mr. Weir's math yields higher claimed damages on models that are higher priced for reasons unrelated to the AquaLift feature (including pricing differences caused by

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differences in time period, brands, models, finish, fuel source, oven capacity, and other oven attributes).

- iii. Mr. Weir continues to propose a constant percentage price premium approach to calculating claimed Class-wide damages in spite of the identified deficiencies associated with such an approach. Mr. Weir's constant percentage price premium approach breaks the nexus between claimed Class-wide damages and Named Plaintiffs' theory of liability.
- b. Responses To Mr. Weir's Rebuttal Points Regarding His Hedonic Regression Analysis. The Weir Reply Declaration does not provide support that Mr. Weir's hedonic regression will be workable in practice in this matter.
- i. Mr. Weir inappropriately asserts that the results of his conjoint analysis and hedonic regression analysis are supportive of each other when the two approaches do not measure the same concept. Conjoint analysis provides a willingness to pay metric. Hedonic regression provides a price premium metric.
 - ii. Mr. Weir omits important explanatory variables from his hedonic regression analysis (creating an omitted variable bias).
 - Contrary to Mr. Weir's assertions, there are numerous oven attributes for which his regression does not control when evaluating a claimed percentage price premium associated with the AquaLift cleaning feature. Mr. Weir's hedonic regression failed to control for numerous non-cleaning benefits enabled by the introduction of AquaLift, including (a) improved aesthetic appeal, (b) improved cooktop performance, and (c) larger oven door window.
 - Mr. Weir dismisses all omitted variable bias concerns based upon the results of his new regression analyses that include two additional oven attributes (i.e., Oven Drawer Type and Cooktop Type). Mr. Weir's dismissal does not address the full extent of the omitted variable problems associated with his analysis. Mr. Weir has not adjusted his regression model to account for the non-cleaning benefits enabled by the introduction of the AquaLift feature.
 - Ovens with the AquaLift cleaning feature also have greater aesthetic appeal, a larger oven door window, and improved cooktop performance. Consequently, when Mr. Weir uses an AquaLift explanatory variable, he is measuring more than just the impact of the cleaning feature on price. Mr. Weir's oversight causes the claimed AquaLift cleaning feature to have an inflated and unreliable price premium percentage. Mr. Weir is not measuring the impact on price of the AquaLift cleaning feature; Mr. Weir is measuring the impact on price of the AquaLift cleaning feature plus the greater aesthetic appeal of such ovens plus a larger oven door window plus improved cooktop performance.

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- While Mr. Weir asserted that qualitative considerations such as “Aesthetic Appeal and Design” and “Ease of Use” are already controlled for in his regression due to the inclusion of variables such as Brand,³ Mr. Weir has provided no substantive evidence to support such an assertion (or that these attributes do not vary across models within a particular brand). Simple visual inspection of various oven models, even within a given brand, indicate varying degrees of (for example) aesthetic appeal and design. It is an untenable position to claim that “Brand” captures the aesthetic appeal and design aspects of all models contained within that Brand.
- iii. Mr. Weir incorrectly dismisses counterintuitive regression results.
- Mr. Weir’s hedonic regression analysis attempts to isolate a claimed price premium associated with a cleaning feature (i.e., the AquaLift cleaning feature). Mr. Weir’s regression includes control variables relating to other types of cleaning features associated with other brands and models (e.g., the EasyClean feature associated with certain LG model ovens). Mr. Weir’s original regression yielded a counterintuitive result: the inclusion of the EasyClean feature is associated with lower oven prices (when one would expect the Easy Clean feature to be associated with higher oven prices). Such a result calls into question the reliability of Mr. Weir’s regression results.
 - Mr. Weir now asserts that counterintuitive results associated with “ancillary control variables” (i.e., variables other than the variable(s) of interest) do not impact the reliability of the hedonic regression results (particularly with respect to the variable(s) of interest). However, counterintuitive results associated with any explanatory variables, including “ancillary control variables,” indicate that problems may exist with the regression specification that call into question the reliability of the model.
 - Mr. Weir now asserts that his regression analysis has difficulty isolating the impact of EasyClean on price from the effect of the LG brand on price. This contention is not complete as an explanation; not all LG ovens included in Mr. Weir’s regression analysis have EasyClean (just as not all Accused Brands have the AquaLift feature). In addition, Mr. Weir’s claim contradicts his own assertions that his inclusion of “Brand” control variables absorb the price effects associated with a particular brand (such as LG). Mr. Weir’s new explanation calls into question the reliability of his regression results.

³ Weir Reply Declaration, p. 28.

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- iv. Mr. Weir does not address important issues when rebutting my opinions regarding his use and extrapolation of results based upon H.H. Gregg sales data.
- Mr. Weir's extrapolation of his hedonic regression results across all at-issue states ignores the fact that H.H. Gregg only has sales in two out of the six at-issue states.
 - Contrary to Mr. Weir's claims that the claimed price premium attributable to AquaLift does not vary across geographies (and can be applied in all at-issue states), Mr. Weir's new state-by-state regression analysis indicates a range of claimed price premiums from 8.9% (West Virginia) to 11.8% (Mississippi).
 - Mr. Weir's new regression indicates a claimed AquaLift price premium for online sales of 25.7% – the magnitude of which indicates that problems exist with his regression model. In other words, Mr. Weir's new regression indicates that when putative Class members purchased an oven online, the price of an oven with AquaLift is 25.7% higher than the price of the same oven with no cleaning feature. This result is not economically reasonable.
 - Mr. Weir performed new regression analyses in which he (1) claimed to remove "return" transactions from the H.H. Gregg sales data and (2) claimed to remove "outliers" from the H.H. Gregg sales data. Mr. Weir also presented the results of his hedonic regression when the data are aggregated to the weekly level (as opposed to quarterly). Based upon the results of his new regression analyses, Mr. Weir claimed that none of the data anomalies had a "material impact" on his hedonic regression analysis or claimed price premium. However, Mr. Weir's claimed percentage price premium dropped by almost one percentage point (i.e., down to 9.9% from 10.8%) when "outliers" were removed from the data set used for Mr. Weir's regression analysis.
- v. Additional detail to my observations concerning Mr. Weir's proposed hedonic regression approach (as presented in the Weir Reply Declaration and Weir Deposition) is provided later in this declaration.
- c. Responses To Mr. Weir's Rebuttal Points Regarding His Conjoint Analysis. The Weir Reply Declaration fails to support Mr. Weir's assertion that the proposed conjoint analysis approach will be workable in practice in this matter.
- i. Mr. Weir takes conflicting positions in the Weir Reply Declaration regarding the choice sets provided to survey respondents and a claimed derivation of a price premium metric.
- Mr. Weir's explanation of "orthogonal design" acknowledges that his conjoint survey includes unrealistic choices. However, the inclusion of unrealistic choices presented to survey respondents contradicts Mr. Weir's

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claim of using real world market pricing data in his conjoint survey. Mr. Weir has asserted that the inclusion of real world market pricing data transforms a willingness to pay metric (derived from a conjoint survey) into a claimed price premium metric.

- Consequently (and additionally), Mr. Weir is incorrect when he asserts that he accounted for supply-side factors in his conjoint analysis by using real world market pricing data (especially given his admission that his conjoint survey includes unrealistic choices).
- ii. A recent book by Orme and Chrzan (cited by Mr. Weir) also contradicts Mr. Weir's claims regarding his conjoint simulation approach and that he has derived a price premium metric.
- The fact that Mr. Weir's conjoint analysis measures a willingness to pay metric associated with the AquaLift feature (relative to "Aqualift partial-clean") and not a market price premium as asserted by Mr. Weir is supported by Orme and Chrzan (2017).
 - Mr. Weir did not include competitive products in his market simulation analysis. Orme and Chrzan (2017) also states that the lack of competitive products in conjoint simulations yields an overstated measure of willingness to pay.
- iii. Mr. Weir's choice of relevant attributes to include in his conjoint survey choice sets appears to be arbitrary and is inconsistent with his hedonic regression analysis. As discussed later in this declaration, items considered important for his regression analysis in determining price are not included in his conjoint analysis.
- iv. Mr. Weir proposes using the results of his conjoint survey and market simulation over the entire putative Class period. Mr. Weir asserts that the preferences for oven cleaning features would not have changed over the putative Class period. However, Mr. Weir has presented no empirical analysis in support of this proposition.
- v. Mr. Weir makes ill-informed claims regarding my ability to evaluate a conjoint analysis from an economic and damages quantification perspective. Mr. Weir also selectively quotes (and hence badly mischaracterizes) my testimony from another matter.
- vi. Additional detail to my observations concerning Mr. Weir's proposed conjoint survey approach (as presented in the Weir Reply Declaration and Weir Deposition) is provided later in this declaration.
- d. Mr. Weir Makes Incorrect Claims That Various Areas Of Individual Inquiry Are Not Required. Mr. Weir makes a new assertion that individual satisfaction with AquaLift

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- is irrelevant for calculating claimed damages (claiming that everyone has paid a higher price). However, Mr. Weir's arguments regarding individual inquiry rely on a one-sided approach when discussing economic harm; he only addresses the cost (or prices paid) and fails to address the benefit (or value received by the consumer).
4. The details of my responses to the claims Mr. Weir made in his reply declaration and deposition are contained in the remainder of this declaration. In the Weir Reply Declaration and Weir Deposition, Mr. Weir made a variety of new claims with respect to (a) his use of a constant percentage price premium approach to calculate claimed Class-wide damages, (b) the reliability of his hedonic regression analysis, (c) the reliability of his conjoint analysis, and (d) the requirement of individual inquiry in this matter. As detailed below, Mr. Weir's new assertions are not relevant, reliable, or accurate; nor do they rebut any of the conclusions drawn in the Ugone Declaration.

III. MR. WEIR DISMISSES IMPORTANT CRITIQUES OF HIS PERCENTAGE PRICE PREMIUM APPROACH

5. **Weir Claim.** In his reply declaration and deposition, Mr. Weir asserted that the application of a constant percentage price premium is an appropriate method by which to determine Class-wide damages. Mr. Weir repeatedly emphasized in his reply declaration that, unlike the price analyses contained in the Ugone Declaration, his conjoint analysis and hedonic regression are capable of isolating the claimed price premium attributable to a specific attribute (i.e., AquaLift) while controlling for all other dimensions (e.g., other oven attributes).⁴ As such, Mr. Weir dismissed the analyses of Challenged Product price variation across numerous dimensions contained in the Ugone Declaration, claiming these

⁴ Weir Reply Declaration, pp. 10 – 11. For example, Mr. Weir stated in his reply declaration that the “purpose of regressions is to determine the effect of an independent variable on a dependent variable, holding all other independent variables constant.” (Underlined text in original.) I do not disagree with Mr. Weir's description of the purpose of a regression analysis, but his comment demonstrates that he misunderstood (and, hence, mischaracterized) the price variation analysis I presented in the Ugone Declaration.

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price analyses have “no bearing on the determination or interpretation of the AquaLift Price Premium.”⁵ In his deposition, Mr. Weir made an assertion (not previously stated in the Weir Declaration) that applying his claimed constant percentage price premium to individual purchases of the Challenged Products would be an “economically reasonable” way to calculate individual Class members’ claimed harm.⁶

6. **Response.** Mr. Weir’s claims with respect to his constant percentage price premium approach and dismissal of the price analyses contained in the Ugone Declaration are incorrect for the following reasons.

- a. **Mr. Weir Misunderstood And Mischaracterized The Purpose Of The Price Analyses In The Ugone Declaration.** Mr. Weir misunderstood and mischaracterized the purpose of (and conclusions derived from) the price analyses contained in the Ugone Declaration.
 - i. In his reply declaration, Mr. Weir compares these price analyses to his conjoint analysis and hedonic regression in terms of measuring the impact of a specific factor (e.g., an oven attribute).⁷ However, as presented in the Ugone Declaration,⁸ the price analyses performed are not meant to provide estimates of the price effects of any one factor (as was the purpose of Mr. Weir’s conjoint analysis and hedonic regression). In actuality, the price analyses were presented to demonstrate (i) variation in purchase prices across dimensions unrelated to the AquaLift feature and (ii) provide illustrative examples of variations in claimed damages (as proposed by Mr. Weir) due to reasons unrelated to AquaLift (i.e., a critical flaw in Mr. Weir’s proposed constant percentage price premium approach to calculating claimed damages).
 - ii. As an example of the price analyses contained in the Ugone Declaration, the price comparison of Whirlpool oven WFE540H0AS and Maytag oven MER8700DS, which are identical across all of Mr. Weir’s identified oven attributes except for brand, indicates a “brand premium” for Maytag over Whirlpool of approximately

⁵ Weir Reply Declaration, p. 11.

⁶ Weir Deposition, pp. 268 – 269.

⁷ Weir Reply Declaration, pp. 9 – 11. Mr. Weir claimed the price analyses contained in the Ugone Declaration are not “capable of isolating the market-wide effect of variation in price due to any one of the factors Ugone analyzes because Ugone compares prices across one dimension.” This is another example of Mr. Weir demonstrating that he misunderstood (and, hence, mischaracterized) the price variation analysis I presented in the Ugone Declaration.

⁸ Ugone Declaration, Section IX.

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\$55 (on average in 2014).⁹ This illustrative example was not intended to provide an average brand premium across all models, but instead is meant to demonstrate a scenario (one among many) in which a constant percentage price premium proposed by Mr. Weir yields claimed damages that vary across models for reasons unrelated to the alleged wrongful conduct. In the aforementioned example, Mr. Weir's constant percentage price premium approach attributes a portion of the \$55 brand premium to the claimed price premium for the AquaLift feature, even though the difference in price was due to the brand of the Challenged Products and is unrelated to AquaLift. Mr. Weir's constant percentage price premium approach breaks the nexus between claimed Class-wide damages and Named Plaintiffs' theory of liability.

- iii. In his reply declaration, Mr. Weir stated that he "purposefully calculated the Price Premium as a percentage in order that [sic] the Price Premium could be applied across all of the Whirlpool brand ovens in the aggregate, Class-wide."¹⁰ This is the flaw in Mr. Weir's proposed methodology. Mr. Weir's percentage price premium approach incorrectly allocates some portion of oven price differences (which are due to considerations unrelated to the alleged wrongful conduct) to claimed damages.¹¹
- b. It Is Not "Economically Reasonable" To Use A Constant Percentage Price Premium To Calculate Individual Harm (If Any) In This Matter. Mr. Weir's claim that it would be "economically reasonable" in this matter to apply a constant percentage price premium to individual purchases is incorrect.
 - i. Mr. Weir's error in logic and application is straightforward. Using Mr. Weir's hedonic regression analysis for discussion purposes, Mr. Weir attempts to isolate a percentage price premium associated with the AquaLift feature holding all other considerations constant that may impact price.¹² However, when he applies his claimed percentage price premium to oven prices, he does not hold all other considerations constant. He applies his claimed percentage price premium to ovens that (for example) are higher priced for reasons totally unrelated to the AquaLift feature (e.g., Jenn Air ovens with the AquaLift cleaning feature as compared to Whirlpool ovens with the AquaLift cleaning feature).
 - ii. Contrary to Mr. Weir's assertions, it would not be "economically reasonable" to apply Mr. Weir's claimed percentage price premium to individual purchases (as he suggests). Model prices vary for reasons unrelated to the alleged wrongful

⁹ Ugone Declaration, p. 46.

¹⁰ Weir Reply Declaration, pp. 8 – 9. (Bracketed text added for clarification.)

¹¹ Ugone Declaration, Section IX.

¹² Weir Reply Declaration, p. 11. Specifically, Mr. Weir stated in his reply declaration that his "regression (and conjoint survey for that matter) includes numerous variables (including brand), which are held constant in order to isolate the Price Premium attributable to AquaLift – independent of the variations in price attributable to brand."

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conduct (e.g., time, brands, models, finish, fuel source, oven capacity, and other oven attributes, etc.).¹³ Consequently, Mr. Weir's proposed approach applies a claimed percentage price premium to pricing differences caused by differences in time period, brands, models, finish, fuel source, oven capacity, and other oven attributes.¹⁴

IV. RESPONSES TO MR. WEIR'S REBUTTAL POINTS REGARDING HIS HEDONIC REGRESSION ANALYSIS

7. With respect to his hedonic regression analysis, Mr. Weir made a variety of claims in his reply declaration and deposition, including multiple claims that were not discussed in the Weir Declaration. Mr. Weir's claims generally can be placed into one of four categories: (a) claims regarding the comparison of results from Mr. Weir's conjoint analysis and hedonic regression; (b) claims regarding omitted variable bias; (c) claims regarding the relevance of counterintuitive regression results; and (d) claims regarding the reliability and accuracy of extrapolating results based upon H.H. Gregg sales data. My evaluation of each of these claims is provided below. Generally, Mr. Weir's claims as presented in the Weir Reply Declaration and Weir Deposition do not support Mr. Weir's assertion that his hedonic regression will be workable in practice in this matter and will provide a reliable common proof measure of Class-wide claimed damages.

A. Mr. Weir's Conjoint Analysis And Hedonic Regression Do Not Yield Comparable Results

8. **Weir Claim.** In his reply declaration and deposition, Mr. Weir provided an explanation not contained in the Weir Declaration for the similar results produced by his conjoint

¹³ Mr. Weir inappropriately proposed to apply a claimed constant percentage price premium, which was calculated while holding all factors constant, to real-world purchases in which these factors (e.g., oven attributes such as brand, finish, fuel source, etc.) actually do vary.

¹⁴ Ugone Declaration, Section IX.

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analysis and hedonic regression.¹⁵ Mr. Weir asserted in the Weir Reply Declaration that the “convergence of these Price Premium estimates using two distinct techniques [i.e., conjoint analysis and hedonic regression], demonstrates that the market for ovens does not place additional value on a partial self-cleaning oven that is above and beyond a manual-clean oven.”¹⁶ Mr. Weir claimed in his deposition that his conjoint analysis found that the non-misleading aspects of AquaLift provide “little to no value.”¹⁷ As a result, Mr. Weir concluded that his hedonic regression and conjoint analysis end up measuring “basically the same thing.”¹⁸ Mr. Weir further asserted in his deposition that, at most, the value of AquaLift’s actual cleaning performance is 0.3% of the Challenged Product’s price based upon the difference between the results of his hedonic regression (i.e., 10.83%) and conjoint analysis (i.e., 10.58%).¹⁹

9. **Response.** Mr. Weir’s new interpretation relating to the claimed convergence of his conjoint analysis and hedonic regression results is incorrect. Mr. Weir’s new interpretation ignores the fact that his conjoint analysis metric and hedonic regression metric measure different concepts, as discussed below.

a. **Hedonic Regression.** Mr. Weir testified that his hedonic regression was designed to measure the price difference between AquaLift and no cleaning mechanism (i.e., manual clean only).²⁰ As such, the results of his hedonic regression, at best, yield an

¹⁵ In the Weir Declaration, Mr. Weir claimed that the similar results of his conjoint analysis and hedonic regression “is a measure of convergent validity, lending greater weight to the accuracy of the results.” (Weir Declaration, p. 3.)

¹⁶ Weir Reply Declaration, p. 5. (Bracketed text added for clarification.)

¹⁷ Weir Deposition, p. 89. Mr. Weir testified that this conclusion is “borne out by the comparison of hedonic regression results with the conjoint results.” (Weir Deposition, p. 87.)

¹⁸ Weir Deposition, p. 89.

¹⁹ Weir Deposition, pp. 88 – 89.

²⁰ Weir Deposition, p. 73.

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- average purchase price differential attributable to the inclusion of the AquaLift feature compared to an oven with no cleaning mechanism.²¹
- b. Conjoint Analysis. According to Mr. Weir, his conjoint analysis was designed to test whether there is any value to AquaLift's cleaning performance by estimating the difference in value between "AquaLift self-clean" and "AquaLift partial-clean."²² Mr. Weir claimed to use the same market simulation approach as that described in a recent book by Orme and Chrzan (2017) (which was not cited in the Weir Declaration). As discussed in **Section V.B** below, Orme and Chrzan (2017) indicate that conjoint-related simulations, such as the one used by Mr. Weir, yield a measure of differences in willingness to pay, which overstates the market price differential.²³ Thus, Mr. Weir's conjoint analysis performed in this matter yields a willingness-to-pay differential between "AquaLift self-clean" and "AquaLift partial-clean," which overstates the market price difference between these two attribute levels.
10. In light of the above observations, Mr. Weir's hedonic regression (measuring a price difference) and conjoint analysis (measuring a willingness-to-pay difference) do not yield comparable results, especially because they measure different concepts. While Mr. Weir claimed in his deposition and reply declaration that either his hedonic regression or conjoint analysis can be used to "isolate the Price Premium solely attributable to the AquaLift feature,"²⁴ Mr. Weir's assertion is incorrect given the aforementioned difference in what is being measured in each approach (and the inapplicability of using a willingness to pay metric in place of a price premium metric).²⁵

²¹ As discussed in Ugone Declaration (Section X.A and X.B), Mr. Weir's hedonic regression fails to account for significant benefits consumers received from the inclusion of the AquaLift feature that are not directly related to cleaning proficiency (e.g., improved aesthetic appeal, improved cooktop performance, and larger oven door window). Thus, the claimed price premium derived from Mr. Weir's hedonic regression overstates the price premium (if any) attributable to the alleged misleading marketing of the AquaLift cleaning feature.

²² Weir Deposition, p. 74. *See also* Weir Reply Declaration, p. 5.

²³ In fact, in other cases, the court has found that reliance on willingness to pay led to unreasonably large claimed damages and rejected a willingness to pay measure based upon a conjoint analysis. (*See, for example*, Order dated March 20, 2018 in *Matthew Townsend et al. vs. Monster Beverage Corporation and Monster Energy Company*.)

²⁴ Weir Reply Declaration, p. 5.

²⁵ A potential reasonableness test to Mr. Weir's conclusions from his conjoint analysis would be to use his market simulator to calculate the differential in value between "AquaLift self-clean" and manual clean. According to Mr. Weir's new theory, his conjoint analysis and market simulations should yield approximately the same differential between (a) "AquaLift self-clean" vs. manual clean and (b) "AquaLift self-clean" vs. "AquaLift partial-clean." For example, Mr. Weir testified that the difference between "AquaLift self-clean" and manual clean would be, at most,

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B. Mr. Weir Failed To Properly Address The Omitted Variable Bias Concerns Associated With His Hedonic Regression

11. In the Ugone Declaration, numerous oven attributes were identified that Mr. Weir's regression analysis failed to directly control for, even though the identified attributes were (and are) relevant to consumers and the pricing of ovens (based upon the documentary evidence in this matter).²⁶ While Mr. Weir did not address omitted variable bias in his initial declaration, Mr. Weir provided in the Weir Reply Declaration and the Weir Deposition new assertions with respect to this topic. In general, Mr. Weir responded to the concerns raised in the Ugone Declaration with assurances that an omitted variable bias was not a concern of his regression analysis. However, as discussed below, Mr. Weir's new claims are incorrect and fail to properly address (and alleviate) the omitted variable bias concerns.

- a. **Weir Claim.** In his reply declaration, Mr. Weir provided an explanation of omitted variable bias that was not in the Weir Declaration. Generally, Mr. Weir asserted that omitted variable bias "exists only when an omitted variable is strongly correlated with the main variable of interest *and* when economic theory suggests that the omitted variable has an effect on the dependent variable (i.e., the variable is 'relevant')." ²⁷ Mr. Weir claimed that the omitted variables identified in the Ugone Declaration lacked evidence of such relationships with the variable of interest (i.e., the AquaLift feature) and the dependent variable (i.e., price).²⁸

Response. Contrary to Mr. Weir's claims, my opinion (as outlined in the Ugone Declaration) is predicated upon the premise that the identified omitted variables may lead to a bias due to correlation with oven prices and the included explanatory variables

0.3 percentage points higher than the difference between "AquaLift self-clean" and "AquaLift partial-clean." (Weir Deposition, pp. 89 and 194 – 195.) However, Mr. Weir has not provided his market simulator in this matter to allow for such a test to be performed.

²⁶ Ugone Declaration, Sections X.B and X.C.

²⁷ Weir Reply Declaration, p. 20. (Italic text included in original.)

²⁸ Weir Reply Declaration, p. 22.

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(such as the AquaLift feature).²⁹ As discussed in the Ugone Declaration, Mr. Weir's hedonic regression failed to control for numerous non-cleaning benefits enabled by the introduction of AquaLift, including (a) improved aesthetic appeal, (b) improved cooktop performance, and (c) larger oven door window.³⁰

- i. Mr. Weir claimed that the following conditions must be satisfied in order for an omitted variable to cause the coefficient on AquaLift to be biased upward (i.e., inflated): (1) the omitted attributes must have a strong positive effect on the price of ovens and (2) the omitted attributes must be strongly positively correlated with the AquaLift attribute.³¹
 - ii. The problem with Mr. Weir's regression is straightforward. Each of the aforementioned attributes omitted from Mr. Weir's regression (i.e., aesthetic appeal, cooktop performance, and oven door window size) are positively correlated with the AquaLift feature as they were improved with the introduction of AquaLift. Mr. Weir claims to be measuring the impact of an AquaLift cleaning feature on oven prices when in fact he is measuring the impact of an AquaLift feature that includes a cleaning feature, improved aesthetic appeal, improved cooktop performance, and a larger oven door window. Mr. Weir is not measuring what he claims to be measuring.
 - iii. It also is reasonable to assume that each of these omitted attributes are positively correlated with oven prices, as these are generally desirable attributes (or attributes that would place upward pressure on oven prices). Thus, these attributes meet the criteria identified by Mr. Weir that will cause the claimed AquaLift price premium from his regression analysis to be inflated.³²
- b. **Weir Claim.** Mr. Weir asserted that "a regression model should be tailored to the variable of interest and not include everything and the kitchen sink."³³ Mr. Weir claimed that, within the Ugone Declaration, I have suggested to "include all possible variables [in his proposed hedonic regression] regardless of relevance or correlation with the main variable of interest: AquaLift."³⁴

²⁹ I noted in my declaration that the one exception to omitted variable bias is when the omitted variable is uncorrelated with the included variables. However, I further noted (with supporting literature) that uncorrelated explanatory variables are rare. (Ugone Declaration, p. 62.)

³⁰ Ugone Declaration, Sections X.B.

³¹ Weir Reply Declaration, p. 21.

³² Mr. Weir admitted in his deposition that he is aware of other oven attributes being "tied to" AquaLift, including oven capacity and burner layout. Mr. Weir incorrectly (and with no basis) asserted that the relationship between AquaLift and these other attributes has no impact on the results of his hedonic regression. (Weir Deposition, pp. 261 – 262.)

³³ Weir Reply Declaration, p. 22.

³⁴ Weir Reply Declaration, p. 23.

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Response. Mr. Weir mischaracterized the observations made in the Ugone Declaration. Contrary to Mr. Weir's claim, I have not suggested to include all possible variables regardless of relevance (or to use a "kitchen sink" approach). As described in the Ugone Declaration, I have identified oven attributes omitted by Mr. Weir that, based upon the evidence in this case, are relevant explanatory variables for oven prices.³⁵

- i. For example, I reviewed the same marketing documents Mr. Weir appeared to rely upon in determining the most important oven attributes for consumers.³⁶ In the same marketing documents cited by Mr. Weir in his initial declaration, numerous omitted variables were identified to be just as important (if not more so) to consumers as the variables included in Mr. Weir's hedonic regression. Thus, based upon the criteria Mr. Weir appears to use in selecting oven attributes, I concluded that Mr. Weir has omitted numerous relevant oven attributes (including aesthetic appeal, cooktop performance, and oven door window size).
- ii. I also note that in Mr. Weir's initial regression analysis, as contained in the Weir Declaration (Exhibit 4), Mr. Weir included 25 explanatory variables (not counting his "Time Period Dummy Variables" and his "Store Geography Dummy Variables"). In addition, Mr. Weir had 20 store geography dummy variables (i.e., states) and 21 time period dummy variables (i.e., quarters).
- c. **Weir Claim.** In his reply declaration, Mr. Weir presented the results of numerous regression analyses not contained in the Weir Declaration. These new analyses include multiple regressions that added one or both of two new explanatory variables: Oven Drawer Type and Cooktop Type.³⁷ Mr. Weir claimed that "[c]ontrary to Ugone's assertion that omitted variable bias causes my estimate of Price Premium damages to be inflated, if anything, these results demonstrate that the AquaLift Price Premium produced by my preliminary regression is conservative."³⁸

Response. Mr. Weir's claim is incomplete. The new explanatory variables included in Mr. Weir's new regressions (i.e., Oven Drawer Type and Cooktop Type) were identified in the Ugone Declaration as two examples of attributes that Mr. Weir could have controlled for but did not in his regression analysis.³⁹ Including two additional variables does not adequately eliminate the concern of omitted variable bias (and that Mr. Weir is not measuring the impact of the AquaLift cleaning feature on oven price).

³⁵ Ugone Declaration, Section X.C.

³⁶ See, for example, Ugone Declaration, pp. 62 – 63.

³⁷ Mr. Weir defined "Cooktop Burner Type" as "[a] set of dummy variables that control for the following types of cooktop burners - Sealed Gas Burners, Induction, Radiant, and Coil." (Weir Reply Declaration, p. 24.) When adding "Cooktop Type" to his regression, Mr. Weir removed "Fuel Type" as an explanatory variable. (Weir Reply Declaration, Exhibit 3.) Mr. Weir provided no explanation for the dropping of "Fuel Type."

³⁸ Weir Reply Declaration, p. 25. (Bracketed text added for clarification.)

³⁹ Ugone Declaration, Section X.C.1.

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In particular, Mr. Weir failed to control for explanatory variables that documentary evidence indicates are correlated with the AquaLift cleaning feature, such as aesthetic appeal, a larger oven door window, and cooktop performance. As a result, Mr. Weir's examination of omitted variable bias is incomplete and unreliable. Mr. Weir's additional regressions (as contained in the Weir Reply Declaration) are not relevant to this issue.⁴⁰

- d. **Weir Claim.** Mr. Weir asserted that his hedonic regression already controls for non-quantifiable attributes, such as "Aesthetic Appeal and Design" and "Ease of Use."⁴¹ As a result, Mr. Weir claimed that the absence of explanatory variables specific to these attributes does not cause an omitted variable bias with respect to the AquaLift feature.⁴²

Response. While Mr. Weir asserted that "Aesthetic Appeal and Design" and "Ease of Use" are already controlled for in his regression due to the inclusion of variables such as Brand,⁴³ Mr. Weir has provided no substantive evidence to support such an assertion (or that these attributes do not vary across models within a particular brand).

- i. Simple visual inspection of various oven models, even within a given brand, indicate varying degrees of (for example) aesthetic appeal and design. It is an untenable position to claim that "Brand" captures the aesthetic appeal and design aspects of all models contained within that Brand.
- ii. Moreover, even if these attributes are correlated with Brand (for example), Mr. Weir has provided no evidence that these variables are not correlated with the variable of interest (i.e., the AquaLift feature). In fact, Mr. Weir noted in his reply declaration that "Ease of Use" is correlated with cleaning features, stating "'Ease of Use' is certainly correlated with other attributes included in [Mr. Weir's] preliminary regression such as the **presence of self-cleaning features**, whether the oven is gas or electric, and the capacity of the oven."⁴⁴ To the extent these oven attributes are correlated with AquaLift,⁴⁵ the claimed price premium derived from Mr. Weir's hedonic regression is unreliable.
- iii. As described in the Ugone Declaration, the price impact of the omitted considerations (e.g., aesthetic appeal and ease of use) are "spread across" the

⁴⁰ In Mr. Weir's new regression, the claimed impact of the AquaLift feature on price increased from 10.83% (original result) to 13.11% (new result with two additional variables). (Weir Reply Declaration, p. 25.) While Mr. Weir asserts this indicates his claimed price premium is conservative, Mr. Weir fails to acknowledge that his proposed hedonic regression is not measuring the impact of the AquaLift cleaning feature on oven price.

⁴¹ Weir Reply Declaration, pp. 26 – 28.

⁴² Weir Reply Declaration, pp. 26 – 28.

⁴³ Weir Reply Declaration, p. 28.

⁴⁴ Weir Reply Declaration, p. 28. (Bold text added for emphasis; bracketed text added for clarification.)

⁴⁵ As discussed above and in the Ugone Declaration (Section X.B), at least aesthetic appeal is correlated with AquaLift as improved aesthetic appeal is one of the benefits enabled by the introduction of AquaLift.

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considerations that are included in the regression analysis (e.g., brand and cleaning features), leading to unreliable results relating to the impact of the AquaLift feature on oven price.⁴⁶

C. Mr. Weir Incorrectly Dismissed Regression Results That Are Counterintuitive

12. In the Ugone Declaration, I provided the observation that Mr. Weir’s hedonic regression yielded counterintuitive results (i.e., counterintuitive coefficients on explanatory variables). In particular, Mr. Weir’s hedonic regression analysis implies that LG’s EasyClean feature negatively impacts price (i.e., an oven with EasyClean will be priced lower than an oven with no cleaning mechanism, holding all other factors constant). With respect to this critique raised in the Ugone Declaration, Mr. Weir responded in his reply declaration and deposition by dismissing the counterintuitive results as immaterial to his regression analysis (which was “designed” to study the impact of AquaLift on prices). However, as discussed below, Mr. Weir’s assertions lack substantive support.

- a. **Weir Claim.** In his reply declaration, Mr. Weir claimed that “counterintuitive signs on ancillary control variables occur frequently in econometric analysis, and that it is routine to report such results in the economic literature.”⁴⁷ In addition, Mr. Weir asserted that the “EasyClean” attribute is not a main variable of interest in his hedonic regression, and thus, the counterintuitive result (i.e., a negative coefficient on EasyClean) has no bearing on the reliability of his regression results.⁴⁸

Response. Contrary to Mr. Weir’s claims, the regression coefficients of “ancillary control variables” are relevant indicators to the reliability of a regression specification.⁴⁹ In general, economic theory and statistics indicates that, in this context, each explanatory variable (e.g., oven attribute) contributes to the price of ovens in accordance to the direction and magnitude of the coefficient estimated (assuming the

⁴⁶ Ugone Declaration, pp. 61 – 62.

⁴⁷ Weir Reply Declaration, p. 28.

⁴⁸ Weir Reply Declaration, pp. 29 – 30. *See also* Weir Deposition, pp. 258 – 259.

⁴⁹ The implications of counterintuitive regression results (i.e., counterintuitive coefficients for explanatory variables) are discussed in a section of the Winter 2016 Economic Committee Newsletter (published by the American Bar Association). The newsletter notes the following: “Coefficients that are statistically and economically significant, and that have economically counterintuitive signs ... generally indicate substantial problems that call into question the reliability of the underlying model.” (Economics Committee Newsletter, ABA Section Of Antitrust Law, Winter 2016, p. 19.)

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coefficient is statistically significant). If an attribute were to have a counterintuitive result, the reliability of other explanatory variables can be called into question.⁵⁰ For example, if oven capacity was estimated to have a negative impact on oven prices (i.e., a negative coefficient, meaning larger oven capacities are correlated with lower prices, holding all else equal), this would be an indication that there is a potential issue with the data and/or specification of the regression (or the underlying theory of the relationship needs to be reexamined).⁵¹

- b. **Weir Claim.** Regarding the counterintuitive result associated with the EasyClean feature (i.e., that the addition of the EasyClean feature is associated with lower oven prices), Mr. Weir claimed that in order to measure the value of EasyClean (or any other “ancillary control variable”), he likely would use a different regression specification than the one he “designed” to measure the value of AquaLift.⁵² Mr. Weir also claimed that because EasyClean is exclusive to the LG brand, the “lack of variation in the ‘EasyClean’ attribute across brand makes it difficult to disentangle the impact of ‘EasyClean’ on price from the effect of the ‘LG’ brand on price and may lead to so-called ‘counterintuitive’ results.”⁵³

Response. Mr. Weir provided no substantive evidence as to why a separate and distinct regression specification is required to isolate the impact of EasyClean on price.⁵⁴

- i. According to Mr. Weir, his hedonic regression was “designed to measure the value of AquaLift,” a specific attribute level for cleaning features.⁵⁵ EasyClean is another attribute level for cleaning features. In fact, in his deposition, Mr. Weir testified that EasyClean is “similar to AquaLift, but sold only on the LG brand.”⁵⁶ As such, there is no reason to believe that a different regression specification (e.g., different explanatory variables) would be required to isolate the impact of EasyClean on oven prices.⁵⁷

⁵⁰ See, for example, Economics Committee Newsletter, ABA Section Of Antitrust Law, Winter 2016.

⁵¹ In other words, it is incorrect to remove the variable or ignore the coefficient of a result that is counterintuitive (i.e., counter to what economic theory would predict) as it could be a sign of an issue with the regression analysis that goes beyond the single coefficient.

⁵² Weir Reply Declaration, pp. 29 – 30. See also Weir Deposition, pp. 258 – 259.

⁵³ Weir Reply Declaration, p. 30.

⁵⁴ Based upon Mr. Weir’s new explanations contained in his reply declaration and deposition testimony, it appears that in developing his regression specification Mr. Weir focused entirely on the AquaLift coefficient while ignoring counterintuitive results produced by the other explanatory variables. This approach ignores the implications of counterintuitive results, which (as discussed earlier) indicate “problems that call into question the reliability of the underlying model.” (Economics Committee Newsletter, ABA Section Of Antitrust Law, Winter 2016, p. 19.)

⁵⁵ Weir Deposition, p. 257.


⁵⁶ Weir Deposition, p. 256.

⁵⁷ The fact that EasyClean and AquaLift are similar features (according to Mr. Weir) suggests that the impact of each feature on oven prices should be similar. However, Mr. Weir’s regression results show opposite effects of EasyClean

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- ii. Mr. Weir claims that his regression analysis may have difficulty isolating the impact of EasyClean on price from the effect of the LG brand on price. Such an assertion lacks support. Not all LG ovens included in his regression analysis have the EasyClean feature (which would allow the regression technique to “disentangle the impact of ‘EasyClean’ on price from the effect of the ‘LG’ brand on price” as Mr. Weir claims to have done for the Whirlpool, Maytag, KitchenAid, and Jenn-Air brands).

Table 1



- iii. Mr. Weir’s claim contradicts his own assertions that his inclusion of the “Brand” control variables absorb the price effects associated with a particular brand (such as LG).⁵⁹

D. Mr. Weir Does Not Address Important Issues When Rebutting My Opinions Regarding The Use And Extrapolation Of Results Based Upon H.H. Gregg Sales Data

13. In the Ugone Declaration, I provided numerous observations related to the construction of the H.H. Gregg sales data used in Mr. Weir’s regression analysis and Mr. Weir’s extrapolation of results based upon the H.H. Gregg sales data to the entire Class. In

(i.e., a negative impact on price) and AquaLift (i.e., a positive impact on price). This observation further demonstrates a potential issue with Mr. Weir’s regression analysis and calls into question the reliability of his regression results (particularly the coefficient on AquaLift).

⁵⁸ Weir Declaration Support Materials (“Oven – HHGregg – Regression.dta;” “Model Attributes.dta;” “1 Ovens – Regression.do.”)

⁵⁹ See, for example, Weir Reply Declaration, pp. 11 and 26 – 28. See also Weir Deposition, pp. 256 – 257. Given that only a subset of the LG ovens included in Mr. Weir’s regression have EasyClean, there is sufficient variation that would allow for the disentanglement of the brand effect and the effect of EasyClean in a properly specified regression model (rendering Mr. Weir’s claims invalid).

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addition to data anomalies, [REDACTED]

[REDACTED]

and has sales in only two out of the six states at issue (i.e., Florida and New Jersey).⁶⁰ In response to the issues raised in the Ugone Declaration, Mr. Weir focused more on the minor issues (i.e., data anomalies), even though such issues were identified only to demonstrate Mr. Weir's lack of attention to detail when constructing his dataset.⁶¹ Mr. Weir performed a series of "sensitivity analyses" to test whether the data anomalies identified in the Ugone Declaration "are material to the results of the model."⁶² While Mr. Weir appeared to focus his efforts on the relatively more minor issues, he did not address the more important issues raised in the Ugone Declaration (i.e., his extrapolation of results based upon H.H. Gregg sales data). I discuss Mr. Weir's new assertions (and the flaws of such assertions) regarding the extrapolation of H.H. Gregg sales data in more detail below.

- a. **Weir Claim.** Mr. Weir asserted in his reply declaration that the "AquaLift Price Premium produced by [his] preliminary regression can be applied across numerous geographies, considering H.H. Gregg operated brick and mortar stores in 20 states and sold appliances online as well."⁶³ To test his claim, Mr. Weir performed a new hedonic regression in which he allowed for the impact of AquaLift to vary across states

⁶⁰ Ugone Declaration, pp. 74 – 75.

⁶¹ My opinion relating to the data anomalies, as stated in the Ugone Declaration, was generally the following: "Mr. Weir provided neither an explanation nor a justification for including information from these [anomalous] transactions in his regression data (or why his claimed percentage price premium should be applied to these purchases)." That is, the observations outlined in the Ugone Declaration provide examples of unjustified discrepancies in Mr. Weir's construction of the data used in his regression analysis that appear to be counter to Mr. Weir's framework (based upon the Weir Declaration and supporting materials). (Ugone Declaration, Section X.F and p. 78. (Bracketed text added for clarification.))

⁶² Weir Reply Declaration, p. 13. Mr. Weir performed new regression analyses in which he (a) claimed to remove return transactions from the H.H. Gregg sales data and (b) claimed to remove "outliers" from the H.H. Gregg sales data. Mr. Weir also presented the results of his hedonic regression when the data are aggregated to the weekly level (as opposed to quarterly). Based upon the results of his new regression analyses, Mr. Weir claimed that none of the data anomalies had a "material impact" on his hedonic regression analysis or claimed price premium. However, Mr. Weir's claimed percentage price premium decreased by almost one percentage point (i.e., down to 9.9% from 10.8%) when outlier data points were removed from the data used in his regression analysis. (Weir Reply Declaration, Table 3, p. 19.)

⁶³ Weir Reply Declaration, p. 31.

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(and online sales).⁶⁴ Based upon his new state-by-state analysis, Mr. Weir concluded that the claimed price premium attributable to AquaLift is not “statistically different” across states.⁶⁵

Response. Mr. Weir’s claims with respect to the extrapolation of his regression results across numerous geographies are inappropriate and lack support.

- i. States Where H.H. Gregg Does Not Make Sales. Mr. Weir provided no evidence that supports the use of his regression results to estimate claimed damages in geographic areas outside of the states H.H. Gregg has made sales. As discussed in the Ugone Declaration, H.H. Gregg sales only include two out of the six states at issue in this matter.⁶⁶
- ii. Mr. Weir’s State-By-State Regression Analysis Yields Variation Across Geographic Areas. Contrary to Mr. Weir’s claims, his state-by-state regression analysis demonstrates variation in his claimed price premium across geographic areas. Mr. Weir’s state-by-state regression analysis indicates claimed price premiums ranging from 8.9% (West Virginia) to 11.8% (Mississippi).⁶⁷ While Mr. Weir claims the “Price Premium for AquaLift is not statically [sic] different across states at the standard 95% confidence level,”⁶⁸ a range of nearly three percentage points can have a significant impact on claimed damages [REDACTED]
- iii. Mr. Weir’s Regression Analysis Yields Significant Variation Across In-Store And Online Sales. Mr. Weir does not address the fact that his new state-by-state regression analysis indicates a claimed price premium attributable to AquaLift of 25.7% for online sales. (Mr. Weir reported the claimed price premium for online sales in Weir Reply Declaration, Exhibit 3, but did not report this result in the narrative to his declaration (i.e., it is not included in his Table 5).)⁶⁹ This significant increase to such a high level in the claimed price premium for online sales (compared to in-store sales) is indicative of a potential issue with his regression analysis.

⁶⁴ Weir Reply Declaration, pp. 31 – 33.

⁶⁵ Weir Reply Declaration, p. 32.

⁶⁶ Ugone Declaration, p. 75.

⁶⁷ Weir Reply Declaration, p. 33.

⁶⁸ Weir Reply Declaration, p. 32. (Bracketed text added for clarification.)

⁶⁹ One must raise the coefficient on “AquaLift x Online Sales” from his Exhibit 3 (i.e., 0.296529) to the mathematical constant e to undo the log transformation of price (i.e., $e^{0.296529} = 1.345182$). This transformed figure is interpreted as the claimed percentage increase in the online price (i.e., 34.5% increase) of a manual clean oven from adding AquaLift. To determine the increase in price as a percentage of the oven already equipped with AquaLift (to compare with Mr. Weir’s claimed price premium factors), one can perform the following calculation: $0.345182 \div (1 + 0.345182) = 0.256606$. This new figure is interpreted the same way as Mr. Weir’s claimed price premium factors (i.e., the claimed price premium of AquaLift for online sales is, on average, 25.7%).

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- b. **Weir Claim.** In his reply declaration, Mr. Weir claimed that the H.H. Gregg data used in his regression analysis are “reflective of the overall market during the class period.”⁷⁰ In his deposition, Mr. Weir claimed he “looked at the retailer data for the Whirlpool-branded ovens to see whether there were similar relationships between the H.H. Gregg and the other retailer data.”⁷¹ Based upon Mr. Weir’s examination of the data, he concluded that “H.H. Gregg can be used as a representative measure of the marketplace.”⁷² Mr. Weir also asserted that H.H. Gregg’s bankruptcy filing during the time of the Class period (which overlaps with the H.H. Gregg sales data) “has no bearing on the analysis.”⁷³ According to Mr. Weir, “Modeling what took place in the actual marketplace for the ovens provides more accurate results than pretending the bankruptcy did not occur in the first place.”⁷⁴

Response. While Mr. Weir claimed he “looked at the retailer data for the Whirlpool-branded ovens” from H.H. Gregg and the other retailers, Mr. Weir has provided no analysis of such data that validates his assertion.

- i. Contrary to Mr. Weir’s claims, and as demonstrated in the Ugone Declaration, prices for a given Challenged Product vary across retailers and vary for reasons unrelated to AquaLift.⁷⁵ KRU
- ii. The same issue likely is true relating to Mr. Weir’s dismissal of the fact that H.H. Gregg filed for bankruptcy during the Class period. Mr. Weir has provided no support that other retailers were operating under the same business circumstances as H.H. Gregg (i.e., a retailer that ultimately became a bankrupt retailer liquidating its assets). From an economic and business perspective, there is no reason to believe (without support) that H.H. Gregg conducted its business in a way that is representative of all other retailers (who are not similarly situated). As discussed in the Ugone Declaration, Mr. Weir’s regression analysis and results (i.e.,

⁷⁰ Weir Reply Declaration, p. 12.

⁷¹ Weir Deposition, p. 237. Mr. Weir noted in his reply declaration that the other retailer data (i.e., Best Buy, Home Depot, Lowe’s, and Sears) did not include sales on non-Whirlpool-branded ovens “available in the marketplace.” In light of this observation, it is unclear how Mr. Weir determined that the H.H. Gregg sales data are “reflective of the **overall market** during the class period.” (Weir Reply Declaration, pp. 12 and 31. (Bold text added for emphasis.) See also Weir Deposition, p. 113.)

⁷² Weir Deposition, p. 237.

⁷³ Weir Reply Declaration, p. 12. See also Weir Deposition, pp. 238 – 239.

⁷⁴ Weir Reply Declaration, p. 12. According to Mr. Weir, the reason for using H.H. Gregg sales data was that the “sales data from other retailers did not include sales on both the Whirlpool brand ovens and other ovens available in the marketplace, which is required if the regression is to be executed appropriately.” As such, Mr. Weir concluded that the “H.H. Gregg sales data was the best available data at the time [he] filed [his] first Declaration.” (Weir Reply Declaration, p. 31. Bracketed text added for clarification.)

⁷⁵ Ugone Declaration, p. 75. Factors such as a retailer’s own brand (e.g., Sears’s Kenmore products), propensity to provide discounts, and customer service may influence pricing.

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coefficients on oven attributes, including AquaLift) may have been biased by store-related variation (i.e., discounts) specific to H.H. Gregg.⁷⁶

V. RESPONSES TO MR. WEIR'S REBUTTAL POINTS REGARDING HIS CONJOINT ANALYSIS

14. With respect to his conjoint analysis, Mr. Weir made a variety of claims in his reply declaration and deposition, including multiple claims that were not discussed in the Weir Declaration. Mr. Weir's claims generally can be placed into one of six categories: (a) inconsistent claims regarding his use of real world data; (b) citations to a recent book by Orme and Chrzan (2017) as support for his assertions regarding market simulations; (c) claims regarding the inclusion of supply-side factors in his analysis; (d) claims regarding his choice of relevant attributes included in conjoint analysis as compared to those included in hedonic regression; (e) claims that preferences for self-clean ovens have not evolved over time; and (f) claims regarding the general acceptability of my opinions and qualifications to rebut the conjoint analysis in the Weir Declaration. My evaluation of each of these claims is provided below.

15. Mr. Weir's claims as presented in the Weir Reply Declaration and Weir Deposition fail to support Mr. Weir's assertion that his proposed conjoint analysis approach will be workable in practice in this matter and will provide a reliable common proof measure of Class-wide claimed damages.

A. Mr. Weir Makes Inconsistent Claims Regarding Use Of Real World Market Data In His Conjoint Analysis

16. **Weir Claim.** In his deposition testimony as well as his reply declaration, Mr. Weir relies upon "the principle of orthogonal design" (a concept that was not articulated in the Weir

⁷⁶ Ugone Declaration, p. 75.

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Declaration) to support his claim that it is not important for choice options in the survey to match real world choices.⁷⁷

17. **Response.** Mr. Weir's explanation of orthogonal design acknowledges that his conjoint analysis includes "unrealistic" choices.⁷⁸ The point Mr. Weir apparently does not understand is that his admission regarding unrealistic choices in his conjoint survey (i.e., that do not bear any resemblance to market realities) contradicts his claim of using real world market pricing data to incorporate supply side considerations into the conjoint analysis. Mr. Weir attempts to rely upon the claimed use of real world prices to transform his willingness to pay metric (from his conjoint survey) into a price premium metric. But that is what leads to a contradiction. Mr. Weir acknowledges that his conjoint analysis uses "orthogonal design" which generates unrealistic choices.⁷⁹ Then Mr. Weir claims he used real world prices (which he does not). Mr. Weir has an internal inconsistency in his positions and the arguments he makes.

- a. In his reply declaration, Mr. Weir states that he has "used real world market pricing data that **already** reflects and controls for the supply side factors of Whirlpool branded ovens that existed during the relevant Class Period."⁸⁰

⁷⁷ Weir Deposition, pp. 82; 168 – 169; 180 – 181; and 273 – 274; and Weir Reply Declaration, pp. 38 – 39. Mr. Weir testified that according to the principle of orthogonal design, it is important to show the consumers "all of the various combinations" of attribute levels, but it is not important that the combinations match the real world choices. (Weir Deposition, pp. 180 – 181.)

⁷⁸ Weir Reply Declaration, pp. 38 – 39 and 42.

⁷⁹ Mr. Weir also indicates that he uses prices in his conjoint survey which are (i) perceived as realistic by consumers in his cognitive and pretest interviews and (ii) close to (but not necessarily the same as) real world prices. (Weir Reply Declaration, p. 38.) However, neither of these claims support the contention as to whether Mr. Weir included real world prices.

⁸⁰ Weir Reply Declaration, p. 42. (Bold and underline text included in original.)

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- b. In response to my criticism regarding his inclusion of unrealistic choices in his conjoint survey, Mr. Weir acknowledges that the choices included in his conjoint survey are unrealistic.⁸¹
18. Allowing for unrealistic choices implies that the choices offered to respondents do not reflect real-world market pricing. (This was empirically pointed out in the Ugone Declaration.⁸²) Mr. Weir cannot have it both ways – admittedly including unrealistic choice sets but also claiming the inclusion of real world prices to justify (albeit incorrectly) supply side factors in his modeling.

B. A Recent Book By Orme and Chrzan (Cited By Mr. Weir) Contradicts His Claims Regarding The Conjoint Simulation Approach

19. **Weir Claim.** In his deposition testimony and his reply declaration, Mr. Weir cites to a recent book by Orme and Chrzan (2017) (which was not cited in the Weir Declaration) to support his claim that his market simulation does not need to include competitive products.⁸³ Mr. Weir also claims that the market simulation approach used in the Weir Declaration is the same as the approach described in Orme and Chrzan (2017).⁸⁴
20. **Response.** Mr. Weir’s citations to Orme and Chrzan (2017) are incomplete. Orme and Chrzan (2017) actually supports the observation that (a) conjoint simulations yield a measure of willingness to pay (not a price premium) and (b) a lack of competitive products in the simulations overstates the willingness to pay metric.
- a. **Orme and Chrzan (2017) Supports That A Conjoint Simulation Yields A Measure Of Willingness To Pay.** The fact that Mr. Weir’s conjoint analysis measures the willingness to pay for the AquaLift cleaning feature relative to “AquaLift partial-clean” (and not a market price premium) is supported by Orme and Chrzan (2017).

⁸¹ Weir Reply Declaration, p. 39.

⁸² Ugone Declaration, Section XI.D.

⁸³ Weir Reply Declaration, pp. 40 – 41. Weir Deposition, p. 162.

⁸⁴ Weir Reply Declaration, pp. 40 – 41. Weir Deposition, p. 164.

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- i. Orme and Chrzan (2017) specifically states that “one can use conjoint simulations to find WTP [willingness to pay].”⁸⁵ Mr. Weir acknowledged that this section of the cited book discussed a measure of willingness to pay.⁸⁶
- ii. An article cited by the same book clarifies the difference between WTP and market price. The article notes that for conjoint studies “[t]he current practice is to compute what many authors call a Willingness to Pay,” but notes a problem with WTP is that it is “not [an] equilibrium outcome[.]. WTP measures only a shift in the demand curve and not what the change in equilibrium price will be as the feature is added or enhanced.” The authors of the article “advocate using equilibrium prices” because “[i]n general, the WTP measure **will overstate** the change in equilibrium price.”⁸⁷ These well-known cautionary considerations are not addressed by Mr. Weir.⁸⁸
- b. Orme and Chrzan (2017) States That The Lack Of Competitive Products Yields An Overstated Measure Of Willingness To Pay. Mr. Weir attempts to justify his failure to use competitive products in his simulations by citing to a recent book by Orme and Chrzan (2017).⁸⁹ However, Mr. Weir is contradicted by his own source in the paragraph following his quoted segment. The book cited in the Weir Reply Declaration identifies the “Gilligan’s Island” problem to outline the necessity of incorporating supply-side factors such as competing products in the marketplace. Mr. Orme states the following in his book:

In the absence of competitive options, rich castaways on a desert island might be willing to pay any amount for a rescue when the boat from Island Rescues, Inc. shows up. However, if Acme Island Rescue Corp. also stops by and offers a lower price, we expect the castaways’ WTP [i.e., willingness to pay] for a rescue from Island Rescues, Inc. will fall quite a bit. In a vacuum, WTP may measure what economists call the

⁸⁵ Orme, Bryan K. and Chrzan, Keith (2017). *Becoming An Expert In Conjoint Analysis: Choice Modeling For Pros*, Sawtooth Software, Inc., Orem, Utah, p. 194. (Bracketed text added for clarification.) Mr. Weir claimed that the “inclusion of proper supply side factors in the simulator, as I have done, allows for a determination of market value.” (Weir Reply Declaration, p. 41.) As discussed in the Ugone Declaration and elsewhere in this reply declaration, Mr. Weir’s discussion of supply-side factors is incomplete as it does not represent supply-side factors that would be necessary to determine a market price absent the alleged misrepresentation. (See Ugone Declaration, pp. 106 – 109.) Also, as discussed throughout this declaration (and in the Ugone Declaration), Mr. Weir does not use realistic market prices in his conjoint survey analysis.

⁸⁶ Weir Deposition, pp. 163 – 164.

⁸⁷ Allenby, G., J. Brazell, J. Howell, And P. Rossi (2013). Using Conjoint Analysis To Determine The Market Value Of Product Features. In *Sawtooth Software Conference Proceedings*, pp. 341 – 342. (Bold text added for emphasis.)

⁸⁸ These well-known cautionary considerations also squarely fall within the purview of an economist.

⁸⁹ Weir Reply Declaration, pp. 40 – 41. Weir Deposition, pp. 162 – 164.

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‘maximum price,’ but in a competitive environment what customers are willing to pay might be quite a bit less.⁹⁰

Mr. Orme uses the analogy to emphasize properly simulating the market with appropriate competitive products included in the simulation in order to avoid measuring the “maximum price.” Mr. Weir’s proposed market simulation does not include competitive products.⁹¹

C. Mr. Weir Is Incorrect When He Asserts That He Accounted For Supply-Side Factors In His Conjoint Analysis

21. **Weir Claim.** In his deposition testimony and reply declaration, Mr. Weir reiterates the (incorrect) claim that his conjoint survey and damages analysis control for supply side factors.⁹² In particular, Mr. Weir asserts that “the supply of Whirlpool brand ovens to the Class is fixed as a matter of history.”⁹³
22. **Response.** Mr. Weir attempts to minimize the need for measuring the supply-side factors necessary to actually determine a market price premium (if it exists) by claiming that the quantity supplied is fixed and that his analysis already accounts for supply-side factors.
- i. **Weir Claim: Quantity Supplied Is Fixed.** Mr. Weir provides this “quantity supplied is fixed” argument to justify his failure to develop a model that would be required to account for supply-side considerations. While the historical quantity supplied of Whirlpool brand ovens is fixed (which is not in dispute, contrary to any possible assertions by Mr. Weir), this fact has no bearing on whether the appropriate measure of economic harm is consumers’ willingness to pay for the AquaLift feature as opposed to a properly identified price premium with a nexus to Named Plaintiffs’ theory of liability (and that a willingness to pay measure somehow is equal to a price premium measure).⁹⁴

⁹⁰ Orme, Bryan K. and Chrzan, Keith (2017). *Becoming An Expert In Conjoint Analysis: Choice Modeling For Pros*, Sawtooth Software, Inc., Orem, Utah, p. 194. (Bracketed text added for clarification.)

⁹¹ Ugone Declaration, Section XI.G.

⁹² Weir Reply Declaration, pp. 42 – 44; and Weir Deposition, pp. 129 and 221.

⁹³ Weir Reply Declaration, pp. 42 – 44.

⁹⁴ Ugone Declaration, Section XI.G.

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- ii. Weir Claim: Supply-Side Factors Included. Mr. Weir asserts that his analysis accounts for supply-side factors by using “real world market pricing data that already reflects and controls for the supply side factors of Whirlpool branded ovens that existed during the relevant Class Period.”⁹⁵ Mr. Weir’s assertion is factually incorrect.
- Mr. Weir proposed to use five prices points for ovens included in his conjoint survey: \$600, \$750, \$900, \$1,050, and \$1,200. However, simply using 5 arbitrary prices (which themselves are not representative of the actual market prices of the Challenged Products) is not sufficient to claim that supply considerations have been incorporated into the analysis (and is not sufficient to assess consumer choices or supplier responses in the market place). Mr. Weir side steps the complete analysis contained in Ugone Declaration on this subject.⁹⁶
 - As stated by Allenby et al. (2013), “[t]o compute equilibrium outcomes, we will have to make assumptions about cost and the nature of competition and the set of competitive offers.”⁹⁷ The aforementioned article outlines a set of supply-side factors needed to calculate the market price premium (i.e., information about costs, the nature of competition, and the set of competitive products).⁹⁸ None of these supply-side factors are used by Mr. Weir, nor has he provided an alternative set of factors needed to measure the impact of incorporating appropriate supply considerations into the analysis. Notably, none of the factors highlighted by Dr. Allenby include a list of five arbitrary prices in the general range of market outcomes as asserted by Mr. Weir.

D. Choice Of Relevant Attributes Is Arbitrary And Inconsistent Across Mr. Weir’s Conjoint Analysis And Hedonic Regression Analysis

23. Weir Claim. Mr. Weir claims that a conjoint analysis does not need to (and should not) include every possible product attribute. In particular, Mr. Weir asserts that the choice of attributes in the conjoint analysis do not need to match those in the hedonic regression.⁹⁹
24. Response. I have made no claims that a conjoint analysis needs to include every possible product attribute. To the contrary, I noted in my declaration that Mr. Weir did not

⁹⁵ Weir Reply Declaration, p. 42.

⁹⁶ Ugone Declaration, Section XI.G.

⁹⁷ Allenby, G., J. Brazell, J. Howell, And P. Rossi (2013). Using Conjoint Analysis To Determine The Market Value Of Product Features. In *Sawtooth Software Conference Proceedings*, p. 341.

⁹⁸ Allenby, G., J. Brazell, J. Howell, And P. Rossi (2013). Using Conjoint Analysis To Determine The Market Value Of Product Features. In *Sawtooth Software Conference Proceedings*, p. 341.

⁹⁹ Weir Reply Declaration, pp. 35 – 36.

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articulate what criteria he used to decide which attributes to include in his hedonic regression and which attributes to include in his conjoint survey.¹⁰⁰ I also noted that Mr. Weir appeared to omit relatively more important oven attributes from his conjoint analysis (based upon a review of the same documents Mr. Weir relied upon).¹⁰¹ Contrary to Mr. Weir's claims, it is not my opinion that the conjoint analysis and hedonic regression have to include the same attributes. Rather, I noted in my declaration that Mr. Weir omitted numerous attribute levels from his conjoint analysis that were shown to impact price according to his regression results (e.g., Samsung brand).¹⁰² In other words, Mr. Weir's selection of attribute levels in the conjoint survey is inconsistent with what his own regression results deem as relevant attributes. No explanation has been provided by Mr. Weir as to why certain attributes were chosen over others for his conjoint survey.

E. Mr. Weir Fails To Provide Appropriate Support For His Assertion That Preferences For Oven Cleaning Features Have Not Evolved Over The Class Period

25. **Weir Claim.** Mr. Weir asserts that his survey results are projectable to the entire putative Class period. Mr. Weir states that during his pretest, the interviewees "indicated unanimous consistency in indicating that their decisions vis-a-vis AquaLift ovens would be consistent over time, types/finishes, and prices."¹⁰³
26. **Response.** Mr. Weir used current survey data and applied such survey data to draw inferences as to consumers' tastes and preferences over a five-year period (and applies a constant percentage price premium over the five-year period). For such an analysis to be

¹⁰⁰ Ugone Declaration, Section XI.B.

¹⁰¹ Ugone Declaration, p. 86.

¹⁰² Ugone Declaration, pp. 84 – 85.

¹⁰³ Weir Reply Declaration, p. 40.

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reliable, Mr. Weir would need to demonstrate that consumers' tastes and preferences have not changed. In the Ugone Declaration and here, I make the following factual observations.¹⁰⁴

- a. Mr. Weir did not produce any evidence to support the extrapolation of his survey results over the entire putative Class period.
- b. Mr. Weir has not provided any documentation relating to his claim that his pretest interviews indicated a consistency in taste and preferences over time.¹⁰⁵
- c. Mr. Weir's reliance on his pretest interviews still requires Mr. Weir to extrapolate the results of eight consumers to the entire putative Class.¹⁰⁶

27. Mr. Weir characterizes my example of using the finish type to show changing consumer preferences as an "apples to oranges comparison."¹⁰⁷ Mr. Weir asserts that while tastes for finish type can change over time, the same does not apply to the cleaning attribute. Mr. Weir's assertion is arbitrary, not to mention inconsistent with his claimed conclusions from his pretest interviews (i.e., consistency in taste and preferences over time and finishes).

F. Mr. Weir's Comments Regarding My Ability To Evaluate The Conjoint Analysis In The Weir Declaration Are Ill-Informed

28. **Weir Claim.** Mr. Weir makes the following statement in his Weir Reply Declaration:
"Ugone's overarching opinions relate to what can and cannot be done with a conjoint

¹⁰⁴ Ugone Declaration, Section XI.F.

¹⁰⁵ Mr. Weir only has produced a list of questions he claims to have asked interviewees (and testified that he incorporated all the responses into his declaration). (Weir Deposition, pp. 135 – 136 and 221.) There is no method of verifying what the actual responses of the interviewees were and whether they support Mr. Weir's assertion regarding the "overwhelming" unanimity of constant preferences over time.

¹⁰⁶ Mr. Weir interviewed 8 out of the 50 individuals who participated in his pretest survey. (Weir Deposition, pp. 209 – 210.)

¹⁰⁷ Weir Reply Declaration, p. 40.

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analysis or conjoint market simulator. Ugone's assertions are baseless, because he is not qualified to render an opinion on conjoint analysis."¹⁰⁸

29. **Response.** Mr. Weir makes ill-informed claims relating to the validity of the opinions expressed in the Ugone Declaration relating to his conjoint analysis.

- a. I am an economist and damages quantifier with 33 years of experience. I do not contend to be an expert in performing conjoint analyses and would not conduct such a survey by myself. However (which Mr. Weir fails to acknowledge), I do have the skills, knowledge, education, experience, and training to evaluate conjoint analyses (and associated analyses) from an economic and damages perspective. This is especially true with respect to evaluating economic-related assumptions made and whether the output of such analyses will provide reliable guidance to the trier of fact as to claimed damages.
- b. Mr. Weir is simply incorrect with respect to my ability to analyze a conjoint analysis from an economic and damages quantification perspective. By Mr. Weir's own admission, conjoint analysis is "a cross-functional discipline" and "involves economics."¹⁰⁹ I have extensive experience analyzing proposed conjoint analyses from an economic and damages quantification perspective and have done so many times.
- c. In addition, my evaluation of Mr. Weir's conjoint analysis either (a) evaluates the inputs and outputs of his conjoint analysis from an economic perspective (and the applicability of the inputs and outputs to claimed damages) or (b) notes the flaws in Mr. Weir's conjoint analysis that also are discussed in his own source materials (and that Mr. Weir has failed to explain how he will overcome). Both sets of criticisms are well within the purview of an economist and a damages quantifier.
- d. Finally, Mr. Weir selectively quotes from a recent deposition I provided in a matter captioned:

Jennifer Beardsall, et al., individually and on behalf of all others similarly situated v. CVS Pharmacy, Inc., Target Corporation, Walgreen Co., Wal-Mart Stores, Inc., and Fruit of the Earth, Inc. (United States District Court, Northern District Of Illinois, Case No. 1:16-cv-06103).

¹⁰⁸ Weir Reply Declaration, p. 34.

¹⁰⁹ Weir Deposition, pp. 128 – 129.

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Mr. Weir badly mischaracterizes the discussion that was taking place in that deposition and goes so far as to truncate answers I provided.¹¹⁰ Reproduced below is my complete answer to the deposition question cited by Mr. Weir.¹¹¹

Q. Okay. You don't consider yourself an expert in designing conjoint analysis surveys, do you?

A. That would be correct. But I do evaluate them from an economic and damage quantification perspective.

Mr. Weir misrepresents my testimony by presenting partial responses and ignoring the substance of the discussion regarding my experience in analyzing conjoint analyses from an economic and damages perspective.¹¹²

VI. MR. WEIR MAKES INCORRECT CLAIMS THAT VARIOUS AREAS OF INDIVIDUAL INQUIRY ARE NOT REQUIRED

30. **Weir Claim.** Mr. Weir asserts that various areas of individual inquiry highlighted in the Ugone Declaration are not required to determine Class-wide damages. In addition to the areas identified in the Weir Declaration, Mr. Weir makes a new assertion that individual satisfaction with AquaLift is irrelevant because it does not change the underlying fact that putative Class members paid a price premium as a result of the alleged misrepresentation of AquaLift.¹¹³

31. **Response.** Mr. Weir is incorrect that individual inquiry factors outlined in the Ugone Declaration are not required. As discussed in the Ugone Declaration, putative Class members who are satisfied with their purchase of the Challenged Products in general, and AquaLift in particular, did not suffer economic harm because satisfied consumers received

¹¹⁰ Weir Reply Declaration, p. 34.

¹¹¹ Deposition of Keith R. Ugone taken on May 1, 2018, *Beardsall v. Fruit of the Earth*, p. 38.

¹¹² Deposition of Keith R. Ugone taken on May 1, 2018, *Beardsall v. Fruit of the Earth*, pp. 38 – 42 and 136 – 137.

¹¹³ Weir Reply Declaration, p. 7. Areas identified in the Weir Declaration include (a) individual knowledge and perceptions about AquaLift, (b) individual reasons for purchase, (c) individual behavior or use of the Challenged Products, and (d) prices paid.

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the economic value for which they bargained.¹¹⁴ Mr. Weir claims that any individual who is “allegedly ‘satisfied’ with the Whirlpool brand ovens is still harmed because he/she has been denied the even greater satisfaction of acquiring the Whirlpool brand oven at a lower price had the AquaLift feature not been included with the Whirlpool brand oven.”¹¹⁵ Mr. Weir is using a one-sided approach when discussing economic harm, wherein he only addresses the cost (or prices paid) and fails to address the benefits (or value received by the consumer). If a putative Class member is satisfied with the Challenged Product purchased at the price paid, that consumer has not be harmed from an economic perspective (i.e., the price paid was not greater than the value received).

VII. SUMMARY

32. I evaluated from an economic and claimed damages perspective the hedonic regression analysis and the conjoint analysis Mr. Weir proposed for measuring a “price premium percentage” attributable to the AquaLift feature.¹¹⁶ I have considered the Weir Declaration, the Weir Reply Declaration, and the Weir Deposition, among other things. Given the facts and circumstances of this case, my opinion is that the approaches proposed by Mr. Weir do not provide a reliable or relevant common proof measure of the economic injury (if any) suffered by putative Class members. A partial enumeration of the reasons for this conclusion include, but are not limited to the following.

- a. Mr. Weir’s assertion is incorrect that his claimed constant percentage price premium approach can be used to calculate reliably Class-wide damages using common proof. Mr. Weir’s math yields higher claimed damages on models that are higher priced for reasons unrelated to the AquaLift feature (including pricing differences caused by

¹¹⁴ Ugone Declaration, Section XIII.C.

¹¹⁵ Weir Reply Declaration, p. 7.

¹¹⁶ I also have addressed whether standard economic analysis could be used to quantify claimed damages on a Class-wide basis using common proof. (Ugone Declaration, p. 3.)

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differences in time period, brands, models, finish, fuel source, oven capacity, and other oven attributes). Mr. Weir's proposed approach severs the nexus between Named Plaintiffs' claim of economic harm and Named Plaintiffs' theory of liability.

- b. Ovens with the AquaLift cleaning feature also have greater aesthetic appeal, a larger oven door window, and improved cooktop performance. Consequently, when Mr. Weir uses an AquaLift explanatory variable in his regression analysis, he is measuring more than just the impact of the cleaning feature on price. Mr. Weir is measuring the impact on price of the AquaLift cleaning feature plus the greater aesthetic appeal of such ovens plus a larger oven door window plus improved cooktop performance.
- c. Mr. Weir's extrapolation of his hedonic regression results across all at-issue states ignores the fact that H.H. Gregg (the source of the data he uses in his regression analysis) only has sales in two out of the six at-issue states. Contrary to Mr. Weir's assertions that the claimed price premium attributable to AquaLift does not vary across geographies (and can be applied in all at-issue states), Mr. Weir's new state-by-state regression analysis indicates a range of claimed price premiums from 8.9% (West Virginia) to 11.8% (Mississippi). In addition, Mr. Weir's new regression indicates a claimed AquaLift price premium for online sales of 25.7% – the magnitude of which indicates that problems exist with his regression model.
- d. With respect to Mr. Weir's proposed conjoint analysis, Mr. Weir is evaluating a willingness to pay metric, not a price premium metric.
- e. With respect to Mr. Weir's proposed conjoint analysis, Mr. Weir has asserted that the inclusion of real world market pricing data transforms his willingness to pay metric (derived from his conjoint survey) into a claimed price premium metric. However, the inclusion of admittedly unrealistic choice sets presented to survey respondents contradicts Mr. Weir's claim of using real world market pricing data. Mr. Weir is incorrect when he asserts that he accounted for supply-side factors in his conjoint analysis by using real world market pricing data (especially given his admission that his conjoint survey includes unrealistic choices).
- f. Mr. Weir's arguments regarding individual inquiry rely on a one-sided approach when discussing economic harm; he only addresses the cost (or prices paid) and fails to address the benefit (or value received by the consumer), among other things.

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33. My analyses, observations, and opinions contained in this declaration are based upon information available to date. I reserve the ability to review documents, deposition transcripts, or other information still to be produced by the Parties to this dispute and to supplement my opinions based upon that review.

I declare under the penalty of perjury under the laws of the United States that the foregoing is true and correct.

Executed in Dallas, TX on June 5, 2018.



Keith R. Ugone, Ph.D.
June 5, 2018